

bearing manifest oscules ; in which case the sponge would, of course, have to be removed from the genus *Cydonium*.

The cortex is 2.5 mm. thick, and is almost entirely constituted by the sterrastral layer. The long spicules of the body pass through it to the exterior, but not in great numbers ; about their distal ends, however, as they pass through the cortex, a considerable number of additional long spicules make their appearance, their proximal ends lying in the outer half or two-thirds of the cortex, their distal ends lying several millimetres beyond its surface. The distal ends are generally broken off, but such as have been observed are simply pointed, so that most of these hispidating spicules are oxeas. Some, however, are modified into tylotoxeas, with large spherical tyloles, which lie embedded in the outer layer of the cortex, the development of the tyloles standing, no doubt, in direct relation to the tensions to which the embedded ends of such long projecting spicules are necessarily exposed. In the case of many Monaxonid sponges the tylole is developed in spicules similarly situated.

The cladomes of the dichotriænes before extrusion from the sponge lie between the outer epithelium and the sterrastral layer, *i.e.*, in the ectochrote, and this is reduced to such thinness that no room is left for any forwardly directed projection of the cladi, hence their extension at right angles to the rhabdome almost immediately on proceeding from their origin. Thus the marked depression of the cladome into a plane at right angles to the rhabdome is to be correlated with the reduction of the ectochrote.

The choanosomal tissue is crowded with a profusion of foreign bodies—skeletons of Radiolaria, of various species of Foraminifera, spicules of Calcareous, Hexactinellid, and Monaxonid sponges, plates of Echinoderms, including the wheel-like scleres of Chirodota, form the bulk of them ; a few grains of sand also occur, and deciduous sterrasters of the sponge itself.

The structure of the sterraster is more than usually well displayed in this sponge. Looked at *en face* the ends of the actines are seen to extend laterally into from four to six recurved spines (Pl. XXI. fig. 37) ; when by a tangential section the spined ends are removed the actines are still seen as separate projecting pillars, but with a circular outline, surrounding an area which is distinguished into a central peripheral portion by a slight difference in refractive index (Pl. XXI. fig. 39). Slightly deeper tangential sections through the solid mass of the spicule reveal the actines as still independent rods, with a circular outline and differentiated central portion, but between them and uniting them into a solid mass is seen a further deposit of silica, which can be distinguished from the actines by a slight difference in refractive index (Pl. XXI. fig. 40). In a longitudinal section the actines are seen as conical rods having their apices at the centre of the spicule and their base outwards. Interstitial silica cements them together almost up to their termination ; where this ceases they extend as separate pillars with concave sides to end in the slightly expanded summit from which the recurved spines proceed (Pl. XXI. fig. 38).